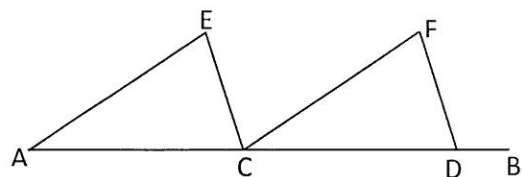


1. If $\overline{AE} \parallel \overline{CF}$, $\overline{CE} \parallel \overline{DF}$, $m\angle E = 62^\circ$, $m\angle A = 41^\circ$. Find each requested angle measure and provide a reason for why you know it. (For example, \parallel lines \rightarrow alt. int. angles \cong or supplementary.)



a. $m\angle ECF =$ _____ Reason: _____

b. $m\angle ECA =$ _____ Reason: _____

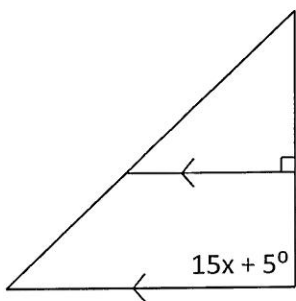
c. $m\angle FCD =$ _____ Reason: _____

d. $m\angle F =$ _____ Reason: _____

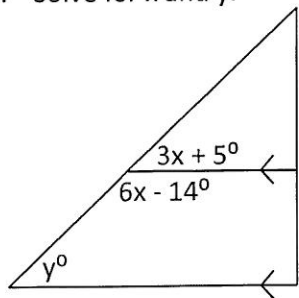
e. $m\angle D =$ _____ Reason: _____

f. $m\angle FDB =$ _____ Reason: _____

2. Solve for x. Reason for Equation: _____



3. Solve for x and y. Reason for Equation with x: _____



Reason for y: _____

4. Draw a diagram of two parallel lines and transversal below. Label one pair of alternate exterior angles on your diagram.

5. Draw a diagram of two parallel lines and transversal below. Label one pair of same-side interior angles on your diagram.

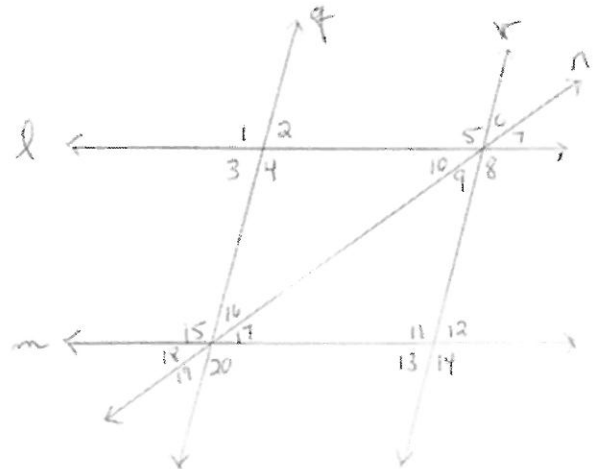
6. Draw a diagram of two parallel lines and transversal below. Label one pair of corresponding angles on your diagram.

7. Draw a diagram of two parallel lines and transversal below. Label one pair of same-side exterior angles on your diagram.

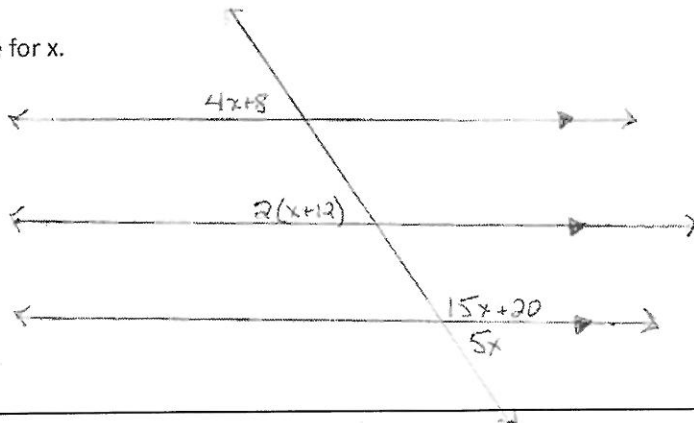
8. Draw a diagram of two parallel lines and transversal below. Label one pair of alternate interior angles on your diagram.

9. Given that *line l* \parallel *line m*, and *line q* \parallel *line r*, name the two lines that are parallel and the transversal that form each pair of angles. If they aren't formed by parallel lines, write NONE. Then classify the type of angle they are and what is true about the angles.

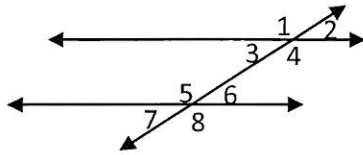
- a. $\angle 1$ and $\angle 15$
- b. $\angle 8$ and $\angle 11$
- c. $\angle 12$ and $\angle 13$
- d. $\angle 10$ and $\angle 17$
- e. $\angle 3$ and $\angle 15$
- f. $\angle 5$ and $\angle 14$



10. Solve for x.



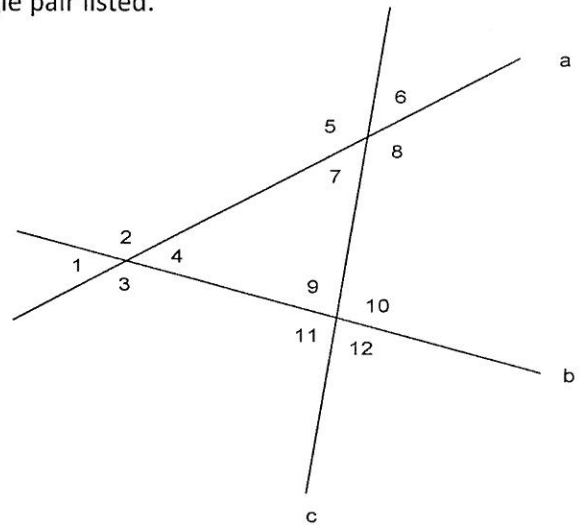
11. Given $line\ a \parallel line\ b$, $m\angle 2 = x^\circ$, $m\angle 6 = (3x - 60)^\circ$. Find the indicated angle measures.



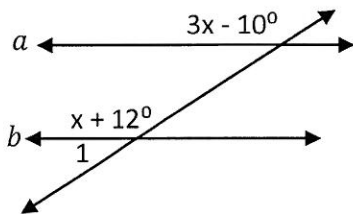
- a. $m\angle 2 =$ _____ Reason: _____ b. $m\angle 1 =$ _____ Reason: _____
 c. $m\angle 3 =$ _____ Reason: _____ d. $m\angle 5 =$ _____ Reason: _____
 e. $m\angle 7 =$ _____ Reason: _____ f. $m\angle 8 =$ _____ Reason: _____

12. Using the diagram to the right, identify the name for each angle pair listed.

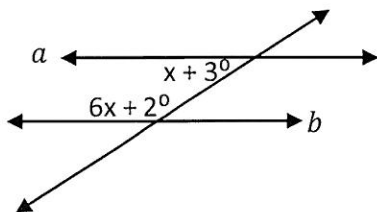
- a. $\angle 9$ and $\angle 8$: _____
 b. $\angle 9$ and $\angle 4$: _____
 c. $\angle 2$ and $\angle 6$: _____
 d. $\angle 1$ and $\angle 12$: _____
 e. $\angle 6$ and $\angle 11$: _____
 f. $\angle 9$ and $\angle 10$: _____
 g. $\angle 2$ and $\angle 3$: _____



13. Given that $line\ a \parallel line\ b$, solve for x and find $m\angle 1$.

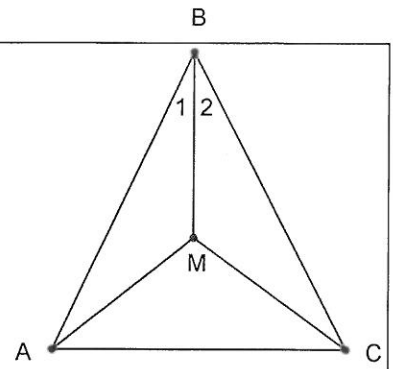


14. Given that $line\ a \parallel line\ b$, solve for x and find the measure of both angles labeled.



15. Given: $\overline{AB} \cong \overline{CB}$; \overline{BM} bisects $\angle ABC$

Prove: $\triangle AMC$ is isosceles with base \overline{AC}

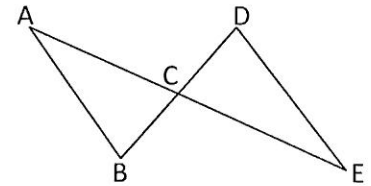


Statements	Reasons
1. $\overline{AB} \cong \overline{CB}$	1.
2.	2. Given
3.	3.
4.	4.
5. $\triangle \underline{\hspace{1cm}} \cong \triangle \underline{\hspace{1cm}}$	5.
6.	6.
7. $\triangle AMC$ is isosceles with base \overline{AC}	7. Definition of isosceles triangle

16. What does CPCTC stand for?

17. **Given:** C is the midpoint of \overline{AE} ; \overline{AE} bisects \overline{DB}

Prove: $\angle A \cong \angle E$



Statements	Reasons